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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,790	06/27/2003	Alan Michael Jaffee	7302	6842

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JOHNS MANVILLE  
Legal Department  
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EXAMINER

BOYD, JENNIFER A

ART UNIT PAPER NUMBER

1771

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/608,790	<b>Applicant(s)</b> JAFFEE, ALAN MICHAEL	
	<b>Examiner</b> Jennifer A Boyd	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.  
 4a) Of the above claim(s) 30 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-29 and 31-33 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 12/8/03.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-29 and 31-33, drawn to a gypsum board, classified in class 442, subclass 386.
  - II. Claim 30, drawn to a process for manufacturing an article, classified in class 156, subclass 39.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the gypsum board may be manufactured by drying the layers before combining them to one another.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Robert Touslee on January 13, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-29 and 31-33. Affirmation of this election must be made by applicant in replying to this Office action. Claim 30 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 – 7, 24, 29 and 31 - 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 8 – 23 and 25 – 28 are rejected as being dependent on rejected claim 1.

7. Claims 1 – 7, 29 and 31 - 33 have the limitation of “chopped continuous glass fibers”. It should be noted that continuous fibers traditionally are long fibers. It appears that the Applicant is attempting to indicate that the glass fibers were originally continuous and then were subsequently chopped into short fibers for incorporation into the mat. However, the method of obtaining the chopped fibers and the initial product of continuous fibers is irrelevant. It is suggested to the Applicant to amend the claim to “chopped glass fibers” to make the claim language clearer.

8. Claim 24 recites that the fibrous mat further comprises “effective amounts” of fine particles of limestone, etc. What constitutes “effective amounts”? The Examiner cannot compare the claim to prior art because it is unknown what amounts would be considered “effective amounts”. For the purposes of examination at this time, the Examiner will assume the presence of any amount of the listed substances would constitute an “effective amount”.

***Claim Rejections - 35 USC § 102***

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9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 – 15, 17 - 21, 23, 25, 27, 29, 31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Jaffee (US 5,772,846).

Jaffee is directed to a nonwoven glass fiber mat for facing gypsum board (Title).

As to claims 1, 17, 29, 31 and 33, Jaffee teaches a nonwoven fibrous mat for use as a facer on a gypsum insulating board (column 2, lines 1 – 15). Jaffee teaches that the mat comprises a major portion of textile glass fibers and a minor portion of polymer fibers (column 2, lines 50 – 60). Jaffee teaches that the nonwoven mat is bound together with a latex such as a crosslinked vinyl chloride acrylate copolymer latex (column 3, lines 60 – 67). The Examiner equates the latex to Applicant's "resinous binder". Jaffee teaches that the glass fibers can have a length between 0.25 and 1 inch (column 3, lines 55 – 60); the Examiner equates this short length to Applicant's "chopped continuous fibers". Jaffee teaches that the glass fibers have an average diameter from about 9 microns to 20 microns (column 3, lines 35 – 40). The minor portion of polymer fibers, equated to Applicant's "fine staple fibers", can comprise microdenier fibers (column 3, lines 45 – 55). It should be noted that "microdenier" refers to fibers having less than 1 denier per filament or .1 tex per filament (see "microdenier", Celanese Acetate, 2004). Jaffee teaches that the polymer fibers can comprise PET polyester fibers (column 3, lines 50 – 55). It should be noted that a PET polyester fiber with a linear density of less than 1 denier has a fiber diameter of approximately less than 10 microns when assuming an average fiber density of 1.35

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g/cc; the diameter was calculated by using the following formula:  $(\text{diameter}(\mu\text{m}))^2 = \text{denier}/(.00707 \times \text{density (g/cc)})$ . Jaffee teaches that the mat comprises a major portion of glass fibers, a minor portion of microdenier polymer fibers and a binder in the range of 15 – 25% by weight, most preferably 20% by weight (column 3, lines 5 – 18). It should be noted that in order for the mat to have a minor portion of microdenier polymer fibers, the polymer fibers would have to comprise less than 40% by weight of the mat meeting Applicant's "1 – 30% by weight". Jaffee states that it is known to face a gypsum wall board with a fiber glass nonwoven mat as shown in US. Patent No. 4,647,496, the disclosure of which is hereby incorporated by reference. It should be noted that phrase "incorporated by reference" means that the information incorporated is as much a part of patent as if the text was repeated in the patent, and should be treated as part of the text of the patent. Therefore, although not explicitly shown in Jaffee, the incorporated US Patent No. 4,647,496 shows in Figure 8 that the nonwoven fibrous mat facing materials are applied to both sides of the gypsum board. It should be noted that both of the facing materials have the same composition. US Patent No. 4,647,496 further teaches that the gypsum material is "set" (Abstract); it should be noted that the limitation of "hydraulic" is not given any patentable weight because of the method of making the gypsum board is not germane to the issue of patentability of the product itself. The Examiner equates the facing material applied to the first and second sides of the gypsum board as "first facer" and "second facer".

As to claims 2 and 3, Jaffee teaches that the chopped continuous glass fibers can comprise any type of glass fibers, but E type, C type, T type and sodium borosilicate are preferred (column 3, lines 34 – 40).

As to claims 4 and 6, Jaffee teaches that the glass fibers have an average diameter from about 9 microns to 20 microns (column 3, lines 35 – 40).

As to claims 5 and 7, Jaffee teaches that the chopped continuous glass fiber lengths can range from 0.25 inches to 1 inch (column 3, lines 55 – 60), or equal to 6.35 – 25.4 mm. It should be noted that the Applicant's range overlaps the range stated by Jaffee.

As to claims 8 - 10, Jaffee teaches that the minor portion of polymer fibers, equated to Applicant's "fine staple fibers", can comprise microdenier fibers such as PET polyester fibers (column 3, lines 50 – 55).

As to claim 11, Jaffee teaches that the minor portion of fibers can comprise glass microfibers (column 3, lines 40 – 45). Jaffee teaches that the glass fibers can be any type of glass fiber including c-type (column 3, lines 34 – 40).

As to claims 12 – 13, Jaffee teaches that the minor portion of polymer fibers, equated to Applicant's "fine staple fibers", can comprise microdenier fibers (column 3, lines 45 – 55). It should be noted that "microdenier" refers to fibers having less than 1 denier per filament or .1 tex per filament (see "microdenier", Celanese Acetate, 2004). Jaffee teaches that the polymer fibers can comprise PET polyester fibers (column 3, lines 50 – 55). It should be noted that a PET polyester fiber with a linear density of less than 1 denier has a fiber diameter of approximately less than 10 microns when assuming an average fiber density of 1.35 g/cc; the diameter was calculated by using the following formula:  $(\text{diameter}(\mu\text{m}))^2 = \text{denier} / (.00707 \times \text{density (g/cc)})$ . It should be noted that a diameter of less than 10 microns overlaps Applicant's requirements of less than 3.5 micrometers as required by claim 12 and less than about 1.9 micrometers as required by claim 13.

As to claim 14, Jaffee teaches that the fibers can be all about the same or different fiber lengths. Jaffee teaches that normally all the glass fiber lengths will be the same except for the glass microfiber which is a distribution of lengths from only a few times the diameter to about one half inch (12.7 mm) or longer. Glass lengths of one inch (25.4 mm), 0.75 inch (19.1 mm), half inch (12.7 mm) or quarter inch (6.4 mm) can be used, but about 0.75 to about one inch lengths are preferred (column 3, lines 53 – 60).

As to claim 15, Jaffee teaches that the mat comprises a major portion of glass fibers, a minor portion of microdenier polymer fibers and a binder in the range of 15 – 25% by weight, most preferably 20% by weight (column 3, lines 5 – 18). Assuming a binder present in the amount of 20% by weight, it should be noted that in order for the mat to have a minor portion of microdenier polymer fibers, the polymer fibers would have to comprise less than 40% by weight of the mat meeting Applicant's "1 – 30% by weight".

As to claim 18, Jaffee teaches that the latex, or "resinous binder", comprises a crosslinkable vinyl chloride acrylate copolymer latex (column 3, lines 60 – 67). Jaffee states that an aqueous stearylated melamine emulsion can be added to the latex to act as an external crosslinker (column 4, lines 14 – 30). Therefore, it is the position of the Examiner that the final product latex would be crosslinked as required by the Applicant.

As to claim 19, Jaffee teaches that the latex, or "resinous binder", comprises a crosslinkable vinyl chloride acrylate copolymer latex (column 3, lines 60 – 67) which is subsequently crosslinked (column 4, lines 14 – 30). It is the position of the Examiner that the crosslinked latex is equivalent to Applicant's "modified acrylic latex binder" because an acrylate is an acrylic.



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As to claims 20 - 21, Jaffee teaches that the stearylated melamine emulsion, which acts as a crosslinker, is present in the amount of up to 10 weight percent (column 4, lines 30 – 38).

As to claim 23, Jaffee teaches that the crosslinkable vinyl chloride acrylate copolymer latex has a glass transition temperature of up to 113 degrees F (column 3, lines 60 – 68). It should be noted that the Applicant requires a glass transition temperature range of about 15 to 45 degrees Celsius (15 – 133 degrees F).

As to claims 25 and 27, it should be noted that Jaffee states that it is known to face a gypsum wall board with a fiber glass nonwoven mat as shown in US. Patent No. 4,647,496, the disclosure of which is hereby incorporated by reference. It should be noted that phrase “incorporated by reference” means that the information incorporated is as much a part of patent as if the text was repeated in the patent, and should be treated as part of the text of the patent. Therefore, although not explicitly taught in Jaffee, the incorporated US Patent No. 4,647,496 teaches that the gypsum core has water-resistant properties imparted by the incorporation of one or more additives (column 9, lines 49 – 60). US Patent 4,647,496 also teaches that the gypsum board can further comprise a paper fiber which acts as a viscosity-control agent (column 13, lines 15 – 20).

11. Claims 1 – 8, 12 – 15, 18, 24, 29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Graves (US 5,389,716).

Graves is directed to a fire resistant cured binder for fibrous mats (Title), the mats being suitable for a backing layer to gypsum (column 3, lines 30 – 40).

As to claims 1, 29 and 33, Graves teaches that the fibrous mat can comprise a binder composition and a mixture of glass and mineral fibers (column 3, lines 44 – 50). The fibrous mat comprises mineral wool fibers having a diameter between 2 and 6 microns (column 9, lines 50 – 60) which may be in part substituted with glass fibers (column 11, lines 33 – 37) having a diameter between 3 and 30 microns (column 10, lines 15 – 25). The glass fibers may be chopped glass fiber strands having a length between 1 mm and 75 mm (column 10, lines 15 – 25). The Examiner equates the glass fibers to Applicant's "chopped continuous glass fibers" and the mineral wool fibers to Applicant's "fine staple fibers". The weight ratio of the wool fibers to the glass fibers may range from 0:1 to 1:0 (column 11, lines 54 – 60) and the binder comprises 3 – 40% by weight of the mat (column 4, lines 34 – 40). Therefore, in one embodiment, the mineral wool fibers can comprise a portion of 1 – 30 percent of the mat meeting Applicant's requirement. It should be noted that facer materials such as the one described by Graves are traditionally applied to both sides of the gypsum board, thus the Examiner equates the mat to Applicant's "first and second facers". It should be noted that the limitation of "hydraulic set" is not given any patentable weight because of the method of making the gypsum board is not germane to the issue of patentability of the product itself.

As to claims 2 and 3, Graves teaches that the glass fibers can comprise c-glass, t-glass and e-glass (column 10, lines 4 – 15).

As to claims 4 and 6, Graves teaches that the glass fibers have a diameter between 3 and 30 microns (column 10, lines 15 – 25).

As to claims 5 and 7, Graves teaches the glass fibers may be chopped glass fiber strands having a length between 1 mm and 75 mm (column 10, lines 15 – 25).

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As to claim 8, Graves teaches that the fine staple fibers may comprise mineral wool fibers (column 9, lines 50 – 60).

As to claims 12 – 13, Graves teaches that the fine staple fibers have a diameter of 2- 6 microns (column 9, lines 50 – 60).

As to claim 14, Graves teaches that the fine staple fibers have a length of 6 – 76 mm (column 9, lines 50 – 60).

As to claim 15, Graves teaches that the weight ratio of the wool fibers to the glass fibers may range from 0:1 to 1:0 (column 11, lines 54 – 60) and the binder comprises 3 – 40% by weight of the mat (column 4, lines 34 – 40). Therefore, in one embodiment, the mineral wool fibers can comprise a portion of 20 - 30 percent of the mat meeting Applicant's requirement.

As to claim 18, Graves teaches that the binder can comprise modified urea-aldehyde (column 4, lines 14 – 23); Graves notes that the aldehyde can comprise formaldehyde (column 6, lines 30 – 50).

As to claim 24, Graves teaches that additional ingredients maybe formulated into the latex and/or resin to aid in processing and vary the end-use properties of the fibrous mat (column 8, lines 44 – 50). Graves teaches that mildewcides and/or fungicides may be added to provide stability toward degradation (column 8, lines 50 – 57).

### ***Claim Rejections - 35 USC § 102/103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 28 and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jaffee (US 5,772,846).

Jaffee teaches a nonwoven fibrous mat for use as a facer on a gypsum insulating board (column 2, lines 1 – 15). Jaffee teaches that the mat comprises a major portion of textile glass fibers and a minor portion of polymer fibers (column 2, lines 50 – 60). Jaffee teaches that the nonwoven mat is bound together with a latex such as a crosslinked vinyl chloride acrylate copolymer latex (column 3, lines 60 – 67). The Examiner equates the latex to Applicant's "resinous binder". Jaffee teaches that the glass fibers can have a length between 0.25 and 1 inch (column 3, lines 55 – 60); the Examiner equates this short length to Applicant's "chopped continuous fibers". Jaffee teaches that the glass fibers have an average diameter from about 9 microns to 20 microns (column 3, lines 35 – 40). The minor portion of polymer fibers, equated to Applicant's "fine staple fibers", can comprise microdenier fibers (column 3, lines 45 – 55). It should be noted that "microdenier" refers to fibers having less than 1 denier per filament or .1 tex per filament (see "microdenier", Celanese Acetate, 2001). Jaffee teaches that the polymer fibers can comprise PET polyester fibers (column 3, lines 50 – 55). It should be noted that a PET polyester fiber with a linear density of less than 1 denier has a fiber diameter of approximately less than 10 microns when assuming an average fiber density of 1.35 g/cc; the diameter was calculated by using the following formula:  $(\text{diameter}(\mu\text{m}))^2 = \text{denier} / (.00707 \times \text{density (g/cc)})$ . Jaffee teaches that the mat comprises a major portion of glass fibers, a minor portion of microdenier polymer fibers and a binder in the range of 15 – 25% by weight, most preferably 20% by weight (column 3, lines 5 – 18). It should be noted that in order for the mat to have a

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minor portion of microdenier polymer fibers, the polymer fibers would have to comprise less than 40% by weight of the mat meeting Applicant's "1 – 30% by weight". Jaffee states that it is known to face a gypsum wall board with a fiber glass nonwoven mat as shown in US. Patent No. 4,647,496, the disclosure of which is hereby incorporated by reference. It should be noted that phrase "incorporated by reference" means that the information incorporated is as much a part of patent as if the text was repeated in the patent, and should be treated as part of the text of the patent. Therefore, although not explicitly shown in Jaffee, the incorporated US Patent No. 4,647,496 shows in Figure 8 that the nonwoven fibrous mat facing materials are applied to both sides of the gypsum board. It should be noted that both of the facing materials have the same composition. US Patent No. 4,647,496 further teaches that the gypsum material is "set" (Abstract); it should be noted that the limitation of "hydraulic" is not given any patentable weight because of the method of making the gypsum board is not germane to the issue of patentability of the product itself. The Examiner equates the facing material applied to the first and second sides of the gypsum board as "first facer" and "second facer".

Although Jaffee does not explicitly teach the claimed flame resistance to pass the test of ASTM Method E84, Class 1 as required by claim 28 and a permeability of at least 250 cfm/ft<sup>2</sup> at a differential pressure of 0.5 inches of water as required by claim 32, it is reasonable to presume that said properties are inherent. Support for said presumption is found in the use of like materials (i.e. a gypsum board sandwiched by two facing layers comprising a major portion of chopped glass fibers having a diameter from 9.5 – 12.5 microns and a minor portion of microdenier polymer fibers) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently

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claimed property would obviously have been present once the Jaffee product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to providing of this rejection made above under 35 USC 102.

***Claim Rejections - 35 USC § 103***

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee (US 5,772,846) in view of Horner, Jr. et al. (US 6,365,533).

Jaffee teaches the claimed invention above but fails to disclose that the second facer can comprise kraft paper.

Horner, Jr. et al. is directed to a foamed facer suitable for use in the construction industry comprising a dry preformed glass fiber mat containing a binder (Abstract). Horner teaches that the first and second facers can be of the same or of a different composition than that of this invention. More specifically, one of the facer sheets maybe be selected from those conventionally employed such as kraft paper and the other facer sheet is one of the current invention which enhances the composite (column 6, lines 1 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a kraft paper as one of the facer materials as suggested by Horner, Jr. et al. in the gypsum board composite of Jaffee motivated by the desire to save manufacturing costs by employing a conventional facer on one side and the improved and enhanced facer on the other side.

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15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee (US 5,772,846) in view of Brown (US 5,514,744).

Jaffee teaches the claimed invention above but fails to teach that the cross-linker can comprise melamine formaldehyde.

Brown is directed to cement products comprising gypsum (Title and Abstract). Brown teaches the polymer binder used can comprise a plasticizer to enhance workability (column 3, lines 24 – 25). Brown teaches that the plasticizer can comprise melamine formaldehyde polymer, preferably comprising 1 to 10 parts by solid content weight. The melamine formaldehyde polymer has a tendency to migrate during cure to the center of the mixture as the product therein cures, thus serving to reinforce and strengthen the main bulk of the product (column 3, lines 24 – 33). The melamine formaldehyde polymer is fully compatible with and will cross-link to acrylic materials (column 3, lines 30 – 35).

It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate melamine formaldehyde as the cross-linker as suggested by Brown in the composition of Jaffee motivated by the desire to reinforce and strengthen the composite product.

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee (US 5,772,846) in view of Carbo et al. (US 2004/0209071).

Jaffee teaches the claimed invention above but fails to teach that the core further comprises a biocide.

Carbo is directed to a mold resistant acoustical panel (Title). Carbo notes that attempts have been made to reduce microbe growth by introducing biocides, such as fungicides and

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bacteriocides, into coatings for acoustical panels. Although some protection against microbe growth is obtained, it is short-lived under severe conditions. When the entire panel contains nutrients for microbes, the relatively small amount of biocide in the coating may not be sufficient to protect the larger amount of food available in the core of the panel (page 1, [0006]). Carbo teaches that the composition of the present invention protects the core of the panel, a function which is not guaranteed by antimicrobial coatings. The biocide in the core affords protection to the entire panel, even if no coating is used (page 2, [0013]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a biocide into the core as suggested by Carbo in the composite of Jaffee motivated by the desire to afford microbe growth protection to the entire panel (Carbo, pages 1 – 2).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

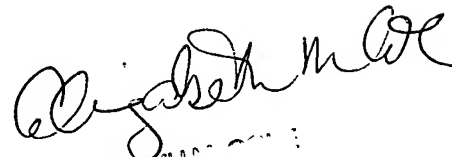
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jennifer Boyd  
January 26, 2005

  
ELIZABETH M. O'CONNELL  
PATENT ATTORNEY